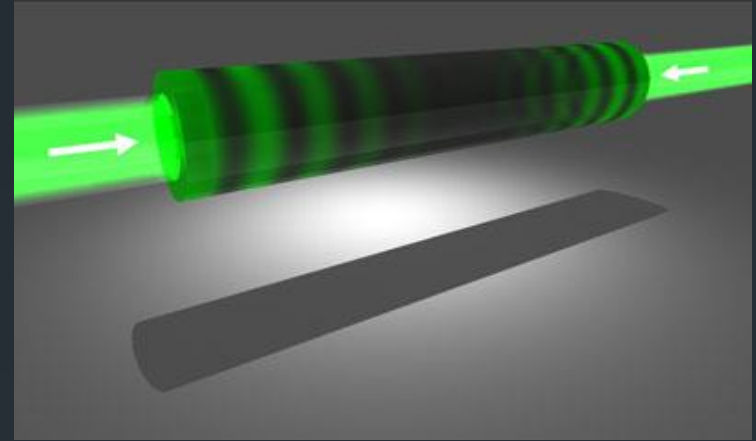


Physicists Create “Anti-laser”

The Discovery

Physicists at Yale University were able to create a system that can absorb the energy of incoming laser beams at almost 100 percent efficiency. The system works as the opposite of a laser which produces coherent light by acting as a coherent perfect absorber or CPA. This is accomplished by directing two laser beams, which were split from a single beam, onto opposite sides of a silicon wafer. The wavelengths of the laser beams are fixed so that an interference pattern develops inside the silicon wafer. The light waves then become trapped within the wafer and bounce between the interior walls of the silicon. During experiments, 99.4 percent of the laser beams' energy transformed into heat.



Possible Uses

- The “anti-laser” could be used as a filter for laser based sensors. These sensors can be used to detect biological agents or pollutants.
- The system may also be used by medical professionals to concentrate laser beams on cancerous tissue.